

224



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/865,597	05/29/2001	Daniel Abugov	19111.0037	4131

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SWIDLER BERLIN SHEREFF FRIEDMAN, LLP
3000 K STREET, NW
BOX IP
WASHINGTON, DC 20007

EXAMINER

ROBINSON, GRETA LEE

ART UNIT PAPER NUMBER

2167

DATE MAILED: 11/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/865,597

Applicant(s)

ABUGOV ET AL.

Examiner

Greta L. Robinson

Art Unit

2167

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on an RCE filed October 25, 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4 and 7-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4, 7-15 and 17-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 June 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1, 4 and 7-24 are pending in the present application.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 22, 2004 has been entered.

3. Claim 16 has been cancelled; and claims 22-24 have been amended.

Drawings

4. The drawings were received on June 22, 2004. These drawings are not acceptable because the amendment is not in compliance with 37 CFR 1.121(d). Replacement drawing sheets must be identified in the top margin of the drawing. Note information below on how to present drawing changes.

INFORMATION ON HOW TO EFFECT DRAWING CHANGES

Replacement Drawing Sheets

Art Unit: 2167

Drawing changes must be made by presenting replacement figures which incorporate the desired changes and which comply with 37 CFR 1.84. An explanation of the changes made must be presented either in the drawing amendments, or remarks, section of the amendment. Any replacement drawing sheet must be identified in the top margin as "Replacement Sheet" (37 CFR 1.121(d)) and include all of the figures appearing on the immediate prior version of the sheet, even though only one figure may be amended. The figure or figure number of the amended drawing(s) must not be labeled as "amended." If the changes to the drawing figure(s) are not accepted by the examiner, applicant will be notified of any required corrective action in the next Office action. No further drawing submission will be required, unless applicant is notified.

Identifying indicia, if provided, should include the title of the invention, inventor's name, and application number, or docket number (if any) if an application number has not been assigned to the application. If this information is provided, it must be placed on the front of each sheet and centered within the top margin.

Annotated Drawing Sheets

A marked-up copy of any amended drawing figure, including annotations indicating the changes made, may be submitted or required by the examiner. The annotated drawing sheets must be clearly labeled as "Annotated Marked-up Drawings" and accompany the replacement sheets.

Timing of Corrections

Applicant is required to submit acceptable corrected drawings within the time period set in the Office action. See 37 CFR 1.85(a). Failure to take corrective action within the set period will result in ABANDONMENT of the application.

If corrected drawings are required in a Notice of Allowability (PTOL-37), the new drawings MUST be filed within the THREE MONTH shortened statutory period set for reply in the "Notice of Allowability." Extensions of time may NOT be obtained under the provisions of 37 CFR 1.136 for filing the corrected drawings after the mailing of a Notice of Allowability.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Art Unit: 2167

6. Claims 1, 4, 7-15 and 17-24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The following limitations do not appear to be described properly or have vague definitions *primary filter* and *secondary filter*. For example, note, page 26 line 18 through page 27 line 1, in which the primary filter has been defined as follows: the "primary filter has been defined based on a *relevant interaction* among the objects ... secondary filter has been defined based on a relevant interaction among the objects". It is unclear as to what the relevant interactions consist of in the disclosure. Also implementation of the present invention for determining positional relationships among objects appears to *require a data structure for indexing*, note page 5 Quadtree Hybrid Indexing. Also, see page 8 line 18 through page 19 line 3. Page 17 lines 11-15 appears to define a boundary tile and interior tile but the terms depend on the element geometry which is not defined.

The disclosure states that the invention is computed by comparing the geometries see page 21 lines 14-15 and page 22 lines 2-5; but the specification is silent as to which exact formulas, functions or theorems can be used to process the system.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1, 4, 7-15 and 17-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, the following limitation is vague: "*determining* a distribution of objects with respect to the tiles ... primary filter ... secondary filter [note claim 1]. The examiner notes that the specification makes reference to various indexing schemes, but the claim does not appear to state an index or indexing method. Claims 20 and 21 parallel claim 1; therefore they are rejected under the same rationale. Claims 4, 7-19 and 22-24 are rejected based on dependency.

9. Claims 1, 4 and 7-24 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: **indexing** (note page 5, page 10 line 1, page 16 lines 6-7), **comparing** (note page 10 line 5 and lines 15-22, page 21 lines 14-15, page 22 lines 2-5 and 20-23).

Response to Arguments

10. Applicant's arguments filed June 22, 2004 have been fully considered but they are not persuasive.

In the response Applicant argued the following: (a) The rejection of claims 1, 4 and 7-24 under 35 USC 112 first paragraph is overcome because the specification fully

Art Unit: 2167

defines the primary filter, and the secondary filter. Applicant states reference can be made on page 18 line 6 to page 19 line 22, page 21 line 20 and page 22 line 5.

Applicant states that the term boundary is used in its standard dictionary meaning.

In response to argument (a), the examiner respectfully maintains the rejection because Applicant has not specifically stated or clarified the description of the use of the limitation as cited on **page 26 line 18 through page 27 line 1**. The description on these pages do not appear to be described properly and Applicant has not addressed this citation.

(b) Applicant states that an "example of a data structure that may be used to implement the present invention is the well-known "spatial index"; and states any suitable indexing scheme may be used to implement the claimed invention. Applicant states that "the particular indexing scheme used is merely a matter of implementation, the omission of claim language referring to an index is not the omission of an essential element of the invention".

In response to argument (b) Applicant appears to argue that the term "indexing" or notation of an indexing scheme is not a necessary limitation for the claim; but that the present invention is implemented through some type of indexing scheme such as a spatial index or some other method. The examiner respectfully maintains the rejection cited under 35 USC 112 second paragraph because if Applicant states that the present invention is implemented through use of a spatial index or some type of indexing scheme and this limitation is not in the claim then Applicant has not clearly claimed the invention.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Schirmer et al. US Patent 6,768,997 B2

Shaw et al. US Patent 6,684,219 B1

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Greta L. Robinson whose telephone number is (571) 272-4118. The examiner can normally be reached on Mon.-Fri. 9:30AM-6:00PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 09/865,597

Art Unit: 2167

Page 8



GRETA ROBINSON
PRIMARY EXAMINER

Greta Robinson
Primary Examiner
November 24, 2004